L Number	Hits	Search Text	DB	Time stamp
-	62	gygi.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/27 10:36
-	11	gygi.in. and steven.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/27 10:36
-	22	("4798795" | "5240859" | "5438017" | "5514559" | "5527711" | "5534132" | "5534440" | "5538897" | "5614368" | "5650270" | "5658725" | "5686310" | "5738984" | "5851781" | "5863740" | "5880270" | "5952653" | "5958703" | "5965131" | "5965457" | "6017693" | "6057096").PN.	USPAT	2004/08/27 12:00
-	38	5538897.URPN.	USPAT	2004/08/27 12:13
-	1	"5240859".PN.	USPAT	2004/08/27 13:06
-	4	("5338686" | "5538897" | "5910403" | "6017693").PN.	USPAT	2004/08/27 13:06
-	22	("4798795" | "5240859" | "5438017" | "5514559" | "5527711" | "5534132" | "5534440" | "5538897" | "5614368" | "5650270" | "5658725" | "5686310" | "5738984" | "5851781" | "5863740" | "5880270" | "5952653" | "5958703" | "5965131" | "5965457" | "6017693" | "6057096").PN.	USPAT	2004/08/27 13:13
-	4	5910403.URPN.	USPAT	2004/08/27 13:18
-	2	("5338686" | "5439803").PN.	USPAT	2004/08/27 13:23
-	12	("Re33524" | "3959287" | "4022876" | "4224031" | "4732864" | "4866270" | "4952685" | "4957858" | "4970144" | "5059415" | "5084266" | "5124267").PN.	USPAT	2004/08/27 13:24
-	7	5338686.URPN.	USPAT	2004/08/27 13:36
-	15	("4647445" | "4656133" | "4830010" | "5059702" | "5317156" | "5386832" | "5413917" | "5439803" | "5542419" | "5837219" | "5910403" | "5916537" | "5924995" | "6010846" | "6355416").PN.	USPAT	2004/08/27 13:46
-	4	("5338686" | "5439803" | "5910403" | "6010846").PN.	USPAT	2004/08/27 13:50
-	1	6355416.URPN.	USPAT	2004/08/27 13:50
-	4	("5338686" | "5438194" | "5910403" | "6010846").PN.	USPAT	2004/08/27 13:51
-	17	4224031.URPN.	USPAT	2004/08/27 13:52
-	11	("4446237" | "4977320" | "5045694" | "5245186" | "5338686" | "5366721" | "5376355" | "5453247" | "5572024" | "5800979" | "6391649").PN.	USPAT	2004/08/27 14:14
-	1	6391649.URPN.	USPAT	2004/08/27 14:16
-	10	("4446237" | "4977320" | "5045694" | "5245186" | "5338686" | "5366721" | "5376355" | "5453247" | "5572024" | "5800979").PN.	USPAT	2004/08/27 14:16
-	3	6010846.URPN.	USPAT	2004/08/27 14:19
-	1	"5338686".PN.	USPAT	2004/08/27 14:19
-	11	5209919.URPN.	USPAT	2004/08/27 14:19
-	10	("3649199" | "4022876" | "4037100" | "4223004" | "4224031" | "4454233" | "4701419" | "5045479" | "5078135" | "5124267").PN.	USPAT	2004/08/27 14:22
-	1	"5209919".PN.	USPAT	2004/08/27 14:24
-	5	5376355.URPN.	USPAT	2004/08/27 14:24
-	1	"5209919".PN.	USPAT	2004/08/27 14:26
-	3	5366721.URPN.	USPAT	2004/08/27 14:26

-	189	("3553452" | "3776700" | "3807235" | "3931516" | "4047030" | "4139346" | "4178359" | "4230797" | "4231999" | "4461328" | "4515781" | "4554839" | "4582789" | "4604363" | "4625112" | "4629689" | "4650750" | "4663944" | "4683195" | "4683202" | "4709016" | "4711955" | "4733073" | "4775619" | "4779467" | "4800159" | "4806546" | "4818681" | "4877745" | "4882127" | "4883750" | "4920264" | "4925629" | "4935357" | "4952518" | "5000921" | "5003059" | "5059654" | "5064754" | "5075217" | "5106585" | "5108703" | "5118605" | "5118937" | "5135870" | "5143451" | "5143854" | "5149625" | "5663242" | "5164594" | "5174962" | "5175209" | "5198540" | "5210412" | "5221518" | "5237016" | "5242974" | "5262128" | "5288644" | "5300774" | "5325021" | "5338688" | "5350676" | "5360819" | "5364759" | "5364760" | "5365063" | "5369004" | "5376355" | "5378602" | "5403711" | "5405746" | "5427929" | "5430136" | "5436143" | "5439649" | "5459039" | "5464985" | "5468610" | "5496562" | "5498545" | "5503980" | "5508169" | "5512295" | "5512439" | "5514548" | "5516931" | "5532227" | "5538897" | "5547835" | "5563410" | "5580434" | "5580733" | "5582979" | "5589136" | "5599500" | "5599666" | "5601982" | "5605662" | "5605798" | "5607912" | "5609907" | "5622824" | "5625184" | "5626184" | "5627369" | "5633496" | "5643800" | "5650489" | "5654150" | "5661028" | "5665967" | "5670322" | "5670381" | "5674686" | "5677195" | "5688642" | "5691141" | "5700642" | "5710028" | "5716825" | "5743960" | "5756050" | "5762876" | "5766847" | "5770367" | "5770860" | "5777324" | "5789395" | "5807522" | "5828063" | "5830655" | "5846717" | "5851765" | "5853989" | "5854486" | "5864137" | "5869240" | "5869242" | "5872003" | "5872010" | "5885775" | "5888819" | "5900481" | "5925520" | "5927547" | "5928906" | "5965363" | "5969350" | "5976798" | "5985356" | "5994065" | "6001567" | "6004744" | "6006171" | "6022688" | "6024925" | "6027890" | "6040193" | "6043031" | "6051378" | "6074823" | "6090558" | "6104028" | "6110426" | "6111251" | "6121048" | "6133436" | "6136269" | "6140045" | "6140053" | "6146854" | "6194144" | "6197498" | "6207370" | "6221601" | "6221605" | "6225061" | "6225450" | "6235478" | "6238871" | "6258538" | "6265716" | "6268131" | "6268144" | "6277573" | "6300076" | "6303309" | "6322970").PN.	USPAT	2004/08/27 14:27
-	938	(mass adj (spectroscopy spectrometry)) and subtractive	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2004/08/27 15:23

-	18	(mass adj (spectroscopy spectrometry)).ab,ti. and subtractive	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/27 15:55
-	7	("5114551" | "5228960" | "5536382" | "5783397" | "6054047" | "6103537" | "6299747").PN.	USPAT	2004/08/27 15:42
-	163	(mass adj (spectroscopy spectrometry)).ab,ti. and subtract$	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/27 15:55
-	23	(mass adj (spectroscopy spectrometry)).ab,ti. and subtract$.ab,ti.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/27 15:56
-	15	("4314343" | "4524420" | "4546643" | "4802102" | "4837726" | "5092343" | "5291426" | "5592402" | "5633511" | "5737445" | "6047134" | "6112161" | "6147344" | "6178387" | "6266633").PN.	USPAT	2004/08/27 16:00
-	7	6147344.URPN.	USPAT	2004/08/27 16:32
-	7	("5114551" | "5228960" | "5536382" | "5783397" | "6054047" | "6103537" | "6299747").PN.	USPAT	2004/08/27 16:40
-	12	inverse adj label$	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/30 12:42

L16 ANSWER 66 OF 71 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI VARIATION OF NITROGEN-15 IN CORN AND SOIL FOLLOWING APPLICATION OF FERTILIZER NITROGEN.

L16 ANSWER 67 OF 71 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI GAS CHROMATOGRAPHIC **MASS SPECTROMETRIC ISOTOPE** DILUTION DETERMINATION OF N N DI METHYL TRYPTAMINE CONCENTRATIONS IN NORMALS AND PSYCHIATRIC PATIENTS.

L16 ANSWER 68 OF 71 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI GAS CHROMATOGRAPHIC **MASS SPECTROMETRIC ISOTOPE** DILUTION ASSAY FOR N N DI METHYL TRYPTAMINE IN HUMAN PLASMA.

L16 ANSWER 69 OF 71 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI METABOLISM OF TRITIATED TESTOSTERONE BY THE ADRENAL OF THE DOG THE ACTION OF ACTH.

L16 ANSWER 70 OF 71 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI SIMULTANEOUS MICRO ESTIMATION OF CHOLINE AND ACETYL CHOLINE BY GAS CHROMATOGRAPHY **MASS SPECTROMETRY ISOTOPE** DILUTION.

L16 ANSWER 71 OF 71 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI A NEW METHOD OF PREPARING NITROGEN SAMPLES FROM HEME FOR **MASS SPECTROMETRIC ISOTOPE** ANALYSIS.

=> FIL CAPLUS

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	16.95	58.25

FILE 'CAPLUS' ENTERED AT 15:45:47 ON 30 AUG 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 30 Aug 2004 VOL 141 ISS 10
FILE LAST UPDATED: 29 Aug 2004 (20040829/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> S (INVERSE (S) LABEL?)
69666 INVERSE
404642 LABEL?

L18 208 (INVERSE (S) LABEL?)

=> S (MASS (W) SPECTRO?)
821090 MASS
1273867 SPECTRO?
L19 224095 (MASS (W) SPECTRO?)

=> S (L18 (W) L19)
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L18 (W) L19'
L20 15 (L18 (W) L19)

=> DIS L20 1- TI
YOU HAVE REQUESTED DATA FROM 15 ANSWERS - CONTINUE? Y/(N):Y
THE ESTIMATED COST FOR THIS REQUEST IS 4.65 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:N
REQUEST CANCELED

=> DIS L20 1- TI
YOU HAVE REQUESTED DATA FROM 15 ANSWERS - CONTINUE? Y/(N):Y
THE ESTIMATED COST FOR THIS REQUEST IS 4.65 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L20 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
TI **Inverse labeling** method for the rapid identification of marker/target proteins

L20 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
TI **Inverse labeling-mass spectrometry** for the rapid identification of differentially expressed protein markers/targets

L20 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
TI Biosynthesis of tunicamycin and metabolic origin of the 11-carbon dialdose sugar, tunicamine

L20 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
TI **Inverse** 15N-metabolic **labeling/mass spectrometry** for comparative proteomics and rapid identification of protein markers/targets

L20 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
TI **Inverse labeling** method for the rapid identification of marker/target proteins

L20 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
TI **Inverse** 18O **labeling mass spectrometry** for the rapid identification of marker/target proteins

L20 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
TI Nitrate contamination of drinking water: Relationship with HPRT variant frequency in lymphocyte DNA and urinary excretion of N-nitrosamines

L20 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
TI Time-dependence of the isotope effects in the unimolecular dissociation of tertiary amine molecular ions

L20 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
TI Development of a method for the determination of chlorpromazine and its major metabolites by gas chromatography/**mass spectrometry**, and application to biological fluids

L20 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN

TI Analysis of cholesterol, cholesterol-5,6-epoxides and cholestane-3β,5α,6β-triol in nipple aspirates of human breast fluid by gas chromatography/**mass spectrometry**

L20 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
TI Quantitation of serum bile acids by isotope dilution with carbon-13-labeled homologs

L20 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
TI Determination of chlorpromazine and its major metabolites by gas chromatography/**mass spectrometry**: application to biological fluids

L20 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
TI Biotransformation of mazindol. I. Isolation and identification of some metabolites from rat urine

L20 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
TI Biosynthesis of streptomycin

L20 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
TI **Mass spectrometry** in biochemical research

=> S (DUPLICATE (W) REMOVE)
8920 DUPLICATE
173338 REMOVE
L21 0 (DUPLICATE (W) REMOVE)

=> d l20

L20 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:451562 CAPLUS
DN 141:20109
TI **Inverse labeling** method for the rapid identification of marker/target proteins
IN Wang, Yingqi Karen
PA USA
SO U.S. Pat. Appl. Publ., 63 pp., Cont.-in-part of U.S. Ser. No. 16,627.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004106150	A1	20040603	US 2003-412964	20030414
	US 2002090652	A1	20020711	US 2001-16627	20011210
PRAI	US 2000-257559P	P	20001222		
	US 2001-332965P	P	20011119		
	US 2001-16627	A2	20011210		

=> d l20-
L21 HAS NO ANSWERS
L21 0 SEA FILE=CAPLUS (DUPLICATE (W) REMOVE)

=> d l20 1-
YOU HAVE REQUESTED DATA FROM 15 ANSWERS - CONTINUE? Y/(N):y

L20 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:451562 CAPLUS
DN 141:20109
TI **Inverse labeling** method for the rapid identification

of marker/target proteins
IN Wang, Yingqi Karen
PA USA
SO U.S. Pat. Appl. Publ., 63 pp., Cont.-in-part of U.S. Ser. No. 16,627.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004106150	A1	20040603	US 2003-412964	20030414
US 2002090652	A1	20020711	US 2001-16627	20011210
PRAI US 2000-257559P	P	20001222		
US 2001-332965P	P	20011119		
US 2001-16627	A2	20011210		

L20 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:41754 CAPLUS
DN 138:350660
TI **Inverse labeling-mass spectrometry** for the rapid identification of differentially expressed protein markers/targets
AU Wang, Y. Karen; Quinn, Douglas F.; Ma, Zhixiang; Fu, Emil W.
CS Central Technologies, Drug Discovery Research, Novartis Pharmaceuticals Corporation, Summit, NJ, 07901, USA
SO Journal of Chromatography, B: Analytical Technologies in the Biomedical and Life Sciences (2002), 782(1-2), 291-306
CODEN: JCBAAI; ISSN: 1570-0232
PB Elsevier Science B.V.
DT Journal
LA English
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:721474 CAPLUS
DN 138:21926
TI Biosynthesis of tunicamycin and metabolic origin of the 11-carbon dialdose sugar, tunicamine
AU Tsvetanova, Billyana C.; Kiemle, David J.; Price, Neil P. J.
CS Department of Chemistry, State University of New York, College of Environmental Science and Forestry, Syracuse, NY, 13210, USA
SO Journal of Biological Chemistry (2002), 277(38), 35289-35296
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English
RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:557066 CAPLUS
DN 137:228810
TI **Inverse** 15N-metabolic **labeling/mass spectrometry** for comparative proteomics and rapid identification of protein markers/targets
AU Wang, Y. Karen; Ma, Zhixiang; Quinn, Douglas F.; Fu, Emil W.
CS Central Technologies, Discovery Research, Novartis Pharmaceuticals Corporation, Summit, NJ, 07901, USA
SO Rapid Communications in Mass Spectrometry (2002), 16(14), 1389-1397
CODEN: RCMSEF; ISSN: 0951-4198
PB John Wiley & Sons Ltd.
DT Journal
LA English

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:505014 CAPLUS
DN 137:59881
TI **Inverse labeling** method for the rapid identification of marker/target proteins
IN Wang, Yingqi Karen; Ma, Zhixiang; Quinn, Douglas Frederick; Fu, Emil W.
PA Novartis A.-G., Switz.; Novartis-Erfindungen Verwaltungsgesellschaft m.b.H.
SO PCT Int. Appl., 57 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002052271	A2	20020704	WO 2001-EP15228	20011221
	WO 2002052271	A3	20021031		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LT, LU, LV, MA, MD, MK, MN, MX, NO, NZ, OM, PH, PL, PT, RO, RU, SE, SG, SI, SK, TJ, TM, TN, TR, TT, UA, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	EP 1346229	A2	20030924	EP 2001-988064	20011221
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004516486	T2	20040603	JP 2002-553119	20011221
PRAI	US 2000-257559P	P	20001222		
	US 2001-332965P	P	20011119		
	WO 2001-EP15228	W	20011221		

L20 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:484339 CAPLUS
DN 135:119042
TI **Inverse** 18O **labeling mass spectrometry** for the rapid identification of marker/target proteins
AU Wang, Y. Karen; Ma, Zhixiang; Quinn, Douglas F.; Fu, Emil W.
CS Core Technologies Area Discovery Research, Novartis Pharmaceuticals Corporation, Summit, NJ, 07901, USA
SO Analytical Chemistry (2001), 73(15), 3742-3750
CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:438847 CAPLUS
DN 125:95153
TI Nitrate contamination of drinking water: Relationship with HPRT variant frequency in lymphocyte DNA and urinary excretion of N-nitrosamines
AU Van Maanen, Jan M. S.; Welle, Irene J.; Hageman, Geja; Dallinga, Jan W.; Mertens, Paul L. J. M.; Kleinjans, Jos C. S.
CS Department Health Risk Analysis and Toxicology, University Limburg, Maastricht, 6200 MD, Neth.
SO Environmental Health Perspectives (1996), 104(5), 522-528
CODEN: EVHPAZ; ISSN: 0091-6765

PB National Institute of Environmental Health Sciences
DT Journal
LA English

L20 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1991:655477 CAPLUS
DN 115:255477
TI Time-dependence of the isotope effects in the unimolecular dissociation of tertiary amine molecular ions
AU Ingemann, Steen; Kluft, Els; Nibbering, Nico M. M.; Allison, Colin E.; Derrick, Peter J.; Hammerum, Steen
CS Inst. Mass Spectrom., Univ. Amsterdam, Amsterdam, 1018 WS, Neth.
SO Organic Mass Spectrometry (1991), 26(10), 875-81
CODEN: ORMSBG; ISSN: 0030-493X
DT Journal
LA English

L20 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1988:400107 CAPLUS
DN 109:107
TI Development of a method for the determination of chlorpromazine and its major metabolites by gas chromatography/**mass spectrometry**, and application to biological fluids
AU Craig, J. Cymerman; Gruenke, Larry D.; Klein, Frederick D.; Hitzemann, Barbara A.; Holaday, John W.; Loh, Horace H.; Braff, David L.; Fischer, Ames; Glick, Ira D.; et al.
CS Dep. Chem. Pharm. Chem., Univ. California, San Francisco, CA, 94143, USA
SO Neurology and Neurobiology (1988), 40(Perspect. Psychopharmacol.), 375-89
CODEN: NEUND9; ISSN: 0736-4563
DT Journal
LA English

L20 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1987:512049 CAPLUS
DN 107:112049
TI Analysis of cholesterol, cholesterol-5,6-epoxides and cholestane-3β,5α,6β-triol in nipple aspirates of human breast fluid by gas chromatography/**mass spectrometry**
AU Gruenke, L. D.; Craig, J. Cymerman; Petrakis, Nicholas L.; Lyon, Michael B.
CS Sch. Pharm., Univ. California, San Francisco, CA, 94143, USA
SO Biomedical & Environmental Mass Spectrometry (1987), 14(7), 335-8
CODEN: BEMSEN; ISSN: 0887-6134
DT Journal
LA English

L20 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1987:152498 CAPLUS
DN 106:152498
TI Quantitation of serum bile acids by isotope dilution with carbon-13-labeled homologs
AU Stellaard, Frans; Paumgartner, Gustav
CS Dep. Med. II, Univ. Munich, Munich, Fed. Rep. Ger.
SO Clinica Chimica Acta (1987), 162(1), 45-51
CODEN: CCATAR; ISSN: 0009-8981
DT Journal
LA English

L20 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1986:141588 CAPLUS
DN 104:141588
TI Determination of chlorpromazine and its major metabolites by gas chromatography/**mass spectrometry**: application to biological fluids

AU Gruenke, L. D.; Craig, J. Cymerman; Klein, F. D.; Nguyen, T. L.; Hitzemann, Barbara A.; Holaday, J. W.; Loh, H. H.; Braff, L.; Fischer, Ames; et al.
CS Sch. Pharm., Univ. California, San Francisco, CA, 94143, USA
SO Biomedical Mass Spectrometry (1985), 12(12), 707-13
CODEN: BMSYAL; ISSN: 0306-042X
DT Journal
LA English

L20 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1976:471962 CAPLUS
DN 85:71962
TI Biotransformation of mazindol. I. Isolation and identification of some metabolites from rat urine
AU Dugger, Harry A.; Coombs, Renate A.; Schwarz, H. J.; Migdalof, Bruce H.; Orwig, Barbara A.
CS Drug Metab. Sect., Sandoz Pharm., East Hanover, NJ, USA
SO Drug Metabolism and Disposition (1976), 4(3), 262-8
CODEN: DMDSAI; ISSN: 0090-9556
DT Journal
LA English

L20 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1968:38112 CAPLUS
DN 68:38112
TI Biosynthesis of streptomycin
AU Tovarova, L.; Kornitskaya, E. Ya.; Pliner, S. A.; Puchkov, V. A.; Vul'fson, N. S.; Khokhlov, A. S.
CS Inst. Chem. Nat. Compounds, Acad. Sci. U.S.S.R., Moscow, USSR
SO Antibiot.; Adv. Res., Prod. Clin. Use, Proc. Congr. (1965), Meeting Date 1964, 604-7
CODEN: 16UDA2
DT Conference
LA English

L20 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1966:509883 CAPLUS
DN 65:109883
OREF 65:20500b-c
TI **Mass spectrometry** in biochemical research
AU Stenhagen, Einar
CS Univ. Goteborg, Swed.
SO Chimia (Aarau) (1966), 20(10), 346-57
DT Journal
LA English

=> FIL STNGUIDE

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	40.01	98.26

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=> FIL EMBASE

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.30	98.56

L24 ANSWER 1 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2004265778 EMBASE
TITLE: Peptide separations by slab gel electrophoresis in pluronic F127 polymer liquid crystals.
AUTHOR: Rill R.L.; Al-Sayah M.A.
CORPORATE SOURCE: R.L. Rill, Department of Biomedical Sciences, College of Medicine, Florida State University, Tallahassee, FL 32306-4300, United States. Randolph.Rill@med.fsu.edu
SOURCE: Electrophoresis, (2004) 25/9 (1249-1254).
Refs: 15
ISSN: 0173-0835 CODEN: ELCTDN
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Proteomics and peptidomics could benefit from simple methods for higb-resolution separation of oligopeptides analogous to slab gel electrophoresis of proteins. Gels of Pluronic F127 copolymer surfactant were investigated as media for slab gel electrophoresis of oligopeptides using a trypsin digest of myoglobin. Concentrated solutions of Pluronic F127 am fluid at low temperatures (≤ 5°C), but become a gel-like micellar liquid crystal upon warming. Nucleic acids are well separated by electrophoresis in these gels as previously shown by Rill and Liu. Good separations of myoglobin tryptic peptides were accomplished by electrophoresis on slab gels of 24% Pluronic F127 or 15% polyacrylamide using the alkaline Laemmli buffer system (without sodium dodecyl sulfate). **Labeling** of peptides with the succinimidyl ester of Cascade Yellow (CY) prior to electrophoresis allowed sensitive detection with blacklight illumination at 365 nm. **Labeled** tryptic peptides were identified by matrix-assisted laser desorption/ionization-time of flight (MALDI-TOF)-**mass spectrometry**. An **inverse** dependence of electrophoretic mobility on **mass** of peptides with charge Z = -1 was observed in both media. Two-dimensional (2-D) electrophoresis of myoglobin peptides on polyacrylamide, then on Pluronic media, at pH 8.3 indicated that the primary separation mechanism of most peptides was the same in both media. A few off-diagonal spots indicated that some peptides were preferentially retarded in Pluronic gels, perhaps due to hydrophobic effects. The ease of gel preparation and peptide recovery are advantages of Pluronic F127 gels for oligopeptide electrophoresis. The two media can be combined conveniently for 2-D electrophoresis, providing means to facilitate protein identification and peptidomics. .COPYRGT. 2004 Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim.

L24 ANSWER 2 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2004189513 EMBASE
TITLE: Different structural states of the proteolipid membrane are produced by ligand binding to the human δ-opioid receptor as shown by plasmon-waveguide resonance spectroscopy.
AUTHOR: Alves I.D.; Cowell S.M.; Salamon Z.; Devanathan S.; Tollin G.; Hruby V.J.
CORPORATE SOURCE: Dr. V.J. Hruby, Chemistry Department, University of Arizona, 1306 East University Boulevard, Tucson, AZ 85721, United States. hruby@u.arizona.edu
SOURCE: Molecular Pharmacology, (2004) 65/5 (1248-1257).
Refs: 45
ISSN: 0026-895X CODEN: MOPMA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 030 Pharmacology
037 Drug Literature Index

LANGUAGE: English
SUMMARY LANGUAGE: English
AB Understanding structure-function relationships and mechanisms of signal transduction in G-protein-coupled receptors (GPCRs) is becoming increasingly important, both as a fundamental problem in membrane biology and as a consequence of their central role as pharmacological targets. Their integral membrane nature and rather low natural abundance present many challenging problems. Using a recently developed technique, plasmon-waveguide resonance (PWR) **spectroscopy**, we investigated the structural changes accompanying the binding of ligands to the human δ-opioid receptor (hDOR) immobilized in a solid-supported lipid bilayer. This highly sensitive technique can directly monitor changes in **mass** density, conformation, and orientation occurring in such thin proteolipid films. Without requiring **labeling** protocols, PWR allows the direct determination of binding constants in a system very close to the receptor's natural environment. In the present study, conformational changes of a proteolipid membrane containing the hDOR were investigated upon binding of a variety of peptide and nonpeptide agonists, partial agonists, antagonists, and **inverse** agonists. Distinctly different structural states of the membrane were observed upon binding of each of these classes of ligands, reflecting different receptor conformational states, and the formation of each state was characterized by different kinetic properties. Binding constants, obtained by quantifying the extent of conformational change as a function of the amount of ligand bound, were in good agreement with published values determined by radiolabeling methods. The results provide new insights into ligand-induced GPCR functioning and illustrate a powerful new protocol for drug development.

L24 ANSWER 3 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2004126863 EMBASE
TITLE: Plasmon-Waveguide Resonance Studies of Ligand Binding to the Human β(2)-Adrenergic Receptor.
AUTHOR: Devanathan S.; Yao Z.; Salamon Z.; Kobilka B.; Tollin G.
CORPORATE SOURCE: G. Tollin, Dept. of Biochem./Molec. Biophys., University of Arizona, Tucson, AZ 85721, United States. gtollin@u.arizona.edu
SOURCE: Biochemistry, (23 Mar 2004) 43/11 (3280-3288). Refs: 34
ISSN: 0006-2960 CODEN: BICHAW
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Plasmon-waveguide resonance (PWR) **spectroscopy** is an optical technique that can be used to probe the molecular interactions occurring within anisotropic proteolipid membranes in real time without requiring molecular **labeling**. This method directly monitors **mass** density, conformation, and molecular orientation changes occurring in such systems and allows determination of protein-ligand binding constants and binding kinetics. In the present study, PWR has been used to monitor the incorporation of the human β(2)-adrenergic receptor into a solid-supported egg phosphatidylcholine lipid bilayer and to follow the binding of full agonists (isoproterenol, epinephrine), a partial agonist (dobutamine), an antagonist (alprenolol), and an **inverse** agonist (ICI-118,551) to the receptor. The combination of differences in binding kinetics and the PWR spectral changes point to the occurrence of multiple conformations that are characteristic of the type of ligand, reflecting differences in the receptor structural states produced by the binding process. These results provide new evidence for the conformational heterogeneity of the liganded states formed by the β (2)-adrenergic

receptor.

L24 ANSWER 4 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2002434645 EMBASE
TITLE: **Inverse labeling-mass spectrometry** for the rapid identification of differentially expressed protein markers/targets.
AUTHOR: Wang Y.K.; Quinn D.F.; Ma Z.; Fu E.W.
CORPORATE SOURCE: Y.K. Wang, Central Technologies, Drug Discovery Research, Novartis Pharmaceut. Corporation, 556 Morris Avenue, Summit, NJ 07901, United States. karen.wang@pharma.novartis.com
SOURCE: Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, (25 Dec 2002) 782/1-2 (291-306).
Refs: 11
ISSN: 1570-0232 CODEN: JCBAAI
PUBLISHER IDENT.: S 1570-0232(02)00561-5
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Comparative proteomic studies can lead to the identification of protein markers for disease diagnostics and protein targets for potential disease interventions. An **inverse labeling** strategy based on the principle of protein stable isotope **labeling** and **mass spectrometric** detection has been successfully applied to three general protein **labeling** methods. In contrast to the conventional single experiment approach, two **labeling** experiments are performed in which the initial **labeling** is reversed in the second experiment. Signals from differentially expressed proteins will distinguish themselves by exhibiting a characteristic pattern of isotope intensity profile reversal that will lead to the rapid identification of these proteins. Application of the **inverse labeling** method is demonstrated using model systems for protein chemical **labeling**, protein proteolytic **labeling**, and protein metabolic **labeling**. The methodology has clear advantages which are illustrated in the various studies. The **inverse labeling** strategy permits quick focus on signals from differentially expressed proteins (markers/targets) and eliminates ambiguities caused by the dynamic range of detection. In addition, the **inverse labeling** approach enables the unambiguous detection of covalent changes of proteins responding to a perturbation.

L24 ANSWER 5 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2002336591 EMBASE
TITLE: Biosynthesis of tunicamycin and metabolic origin of the 11-carbon dialdose sugar, tunicamine.
AUTHOR: Tsvetanova B.C.; Kiemle D.J.; Price N.P.J.
CORPORATE SOURCE: N.P.J. Price, Dept. of Anesthesiology, University of Rochester, Box 711, 601 Elmwood Ave., Rochester, NY 14642-8711, United States. Neil_Price@urmc.rochester.edu
SOURCE: Journal of Biological Chemistry, (20 Sep 2002) 277/38 (35289-35296).
Refs: 25
ISSN: 0021-9258 CODEN: JBCHA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English

SUMMARY LANGUAGE: English

AB Tunicamycin is a reversible inhibitor of polyprenolphosphate: N-acetylhexosamine-1-phosphate translocases and is produced by several Streptomyces species. We have examined tunicamycin biosynthesis, an important but poorly characterized biosynthetic pathway. Biosynthetic precursors have been identified by incorporating radioactive and stable isotopes, and by determining the **labeling** pattern using electrospray ionization-collision induced dissociation-**mass spectrometry** (ESI-CID-MS), and proton, deuterium, and C-13 nuclear magnetic resonance (NMR) **spectroscopy**. Preparation and analysis of [uracil-5-(2)H]-**labeled** tunicamycin established the complete ESI-CID-MS fragmentation pathway for the major components of the tunicamycin complex. Competitive metabolic experiments indicate that 7 deuteriums incorporate into tunicamycin from [6,6'-(2)H,(2)H]-**labeled** D-glucose, 6 of which arise from D-GlcNAc and 1 from uridine and/or D-ribose. **Inverse** correlation NMR experiments (heteronuclear single-quantum coherence (HSQC)) of (13)C-**labeled** tunicamycin enriched from D-[1-(13)C] glucose suggest that the unique tunicamine 11-carbon dialdose sugar backbone arises from a 5-carbon furanose precursor derived from uridine and a 6-carbon N-acetylamino-pyranose precursor derived from UDP-D-N-acetylglucosamine. The equivalent incorporation of (13)C into both the α-1" and β-11' anomeric carbons of tunicamycin supports a direct biosynthesis via 6-carbon metabolism. It also indicates that the tunicamine motif and the α-1"-linked GlcNAc residue are both derived from the same metabolic pool of UDP-GlcNAc, without significant differential metabolic processing. A biosynthetic pathway is therefore proposed for tunicamycin for the first time: an initial formation of the 11-carbon tunicamine sugar motif from uridine and UDP-GlcNAc via uridine-5'-aldehyde and UDP-4-keto-6-ene-N-acetyl-hexosamine, respectively, and subsequent formation of the anomeric-to-anomeric α, β-1",11'-glycosidic bond.

L24 ANSWER 6 OF 16 EMBASE on STN

ACCESSION NUMBER: 2002276676 EMBASE

TITLE: Pharmacokinetics of plasma enfuvirtide after subcutaneous administration to patients with human immunodeficiency virus: Inverse Gaussian density absorption and 2-compartment disposition.

AUTHOR: Zhang X.; Nieforth K.; Lang J.-M.; Rouzier-Panis R.; Reynes J.; Dorr A.; Kolis S.; Stiles M.R.; Kinchelow T.; Patel I.H.

CORPORATE SOURCE: Dr. X. Zhang, Department of Clinical Pharmacology, Hoffmann-La Roche Inc., 340 Kingsland St, Nutley, NJ 07110, United States. xiaoping.zhang@roche.com

SOURCE: Clinical Pharmacology and Therapeutics, (2002) 72/1 (10-19).
Refs: 23
ISSN: 0009-9236 CODEN: CLPTAT

COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Objective: Enfuvirtide (T-20) is the first of a novel class of human immunodeficiency virus (HIV) drugs that block gp41-mediated viral fusion to host cells. The objectives of this study were to develop a structural pharmacokinetic model that would adequately characterize the absorption and disposition of enfuvirtide pharmacokinetics after both intravenous and subcutaneous administration and to evaluate the dose proportionality of enfuvirtide pharmacokinetic parameters at a subcutaneous dose higher than

that currently used in phase III studies. Methods: Twelve patients with HIV infection received 4 single doses of enfuvirtide separated by a 1-week washout period in an open-**label**, randomized, 4-way crossover fashion. The doses studied were 90 mg (intravenous) and 45 mg, 90 mg, and 180 mg (subcutaneous). Serial blood samples were collected up to 48 hours after each dose. Plasma enfuvirtide concentrations were measured with use of a validated liquid chromatography-tandem **mass spectrometry** method. Results: Enfuvirtide plasma concentration-time data after subcutaneous administration were well described by an **inverse** Gaussian density function-input model linked to a 2-compartment open distribution model with first-order elimination from the central compartment. The model-derived mean pharmacokinetic parameters (±SD) were volume of distribution of the central compartment (3.8 ± 0.8 L), volume of distribution of the peripheral compartment (1.7 ± 0.6 L), total clearance (1.44 ± 0.30 L/h), intercompartmental distribution (2.3 ± 1.1 L/h), bioavailability (89% ± 11%), and mean absorption time (7.26 hours, 8.65 hours, and 9.79 hours for the 45-mg, 90-mg, and 180-mg dose groups, respectively). The terminal half-life increased from 3.46 to 4.35 hours for the subcutaneous dose range from 45 to 180 mg. Conclusions: An **inverse** Ganssian density function-input model linked to a 2-compartment open distribution model with first-order elimination from the central compartment was appropriate to describe complex absorption and disposition kinetics of enfuvirtide plasma concentration-time data after subcutaneous administration to patients with HIV infection. Enfuvirtide was nearly completely absorbed from subcutaneous depot, and pharmacokinetic parameters were linear up to a dose of 180 mg in this study.

L24 ANSWER 7 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2001327504 EMBASE

TITLE: **Inverse** (18)O **labeling mass spectrometry** for the rapid identification of marker/target proteins.

AUTHOR: Wang Y.K.; Ma Z.; Quinn D.F.; Fu E.W.

CORPORATE SOURCE: Y.K. Wang, Core Technologies Area, Discovery Research, Novartis Pharmaceuticals Corporation, 556 Morris Avenue, Summit, NJ 07901, United States. Karen.wang@pharma.novartis.com

SOURCE: Analytical Chemistry, (1 Aug 2001) 73/15 (3742-3750). Refs: 25 ISSN: 0003-2700 CODEN: ANCHAM

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 029 Clinical Biochemistry

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Systematic analysis of proteins is essential in understanding human diseases and their clinical treatments. To achieve the rapid and unambiguous identification of marker or target proteins, a new procedure termed "**inverse labeling**" is proposed. With this procedure, to evaluate protein expression of a diseased or a drug-treated sample in comparison with a control sample, two converse **labeling** experiments are performed in parallel. The perturbed sample (by disease or by drug treatment) is **labeled** in one experiment, whereas the control is **labeled** in the second experiment. When mixed and analyzed with its unlabeled counterpart for differential comparison using **mass spectrometry**, a characteristic **inverse labeling** pattern of **mass** shift will be observed between the two parallel analyses for proteins that are differentially expressed. In this study, protein **labeling** is achieved through (18)O incorporation into peptides by proteolysis performed in [(18)O]water. Once the peptides are identified with the characteristic **inverse labeling** pattern of (18)O/(16)O ion intensity shift, MS data of

peptide fingerprints or peptide sequence information can be used to search a protein database for protein identification. The methodology has been applied successfully to two model systems in this study. It permits quick focus on the signals of differentially expressed proteins. It eliminates the detection ambiguities caused by the dynamic range of detection on proteins of extreme changes in expression. It enables the detection of protein modifications responding to perturbation. This strategy can also be extended to other protein-**labeling** methods, such as chemical or metabolic **labeling**, to realize the same benefits.

L24 ANSWER 8 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 96200372 EMBASE
DOCUMENT NUMBER: 1996200372
TITLE: Nitrate contamination of drinking water: Relationship with HPRT variant frequency in lymphocyte DNA and urinary excretion of N-nitrosamines.
AUTHOR: Van Maanen J.M.S.; Welle I.J.; Hageman G.; Dallinga J.W.; Mertens P.L.J.M.; Kleinjans J.C.S.
CORPORATE SOURCE: Health Risk Analysis and Toxicology, University of Limburg, PO Box 616,6200 MD Maastricht, Netherlands
SOURCE: Environmental Health Perspectives, (1996) 104/5 (522-528). ISSN: 0091-6765 CODEN: EVHPAZ
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 017 Public Health, Social Medicine and Epidemiology
046 Environmental Health and Pollution Control
LANGUAGE: English
SUMMARY LANGUAGE: English

AB We studied peripheral lymphocyte HPRT variant frequency and endogenous nitrosation in human populations exposed to various nitrate levels in their drinking water. Four test populations of women volunteers were compared. Low and medium tap water nitrate exposure groups (14 and 21 subjects) were using public water supplies with nitrate levels of 0.02 and 17.5 mg/l, respectively. Medium and high well water nitrate exposure groups (6 and 9 subjects) were using private water wells with mean nitrate levels of 25 and 135 mg/l, respectively. Higher nitrate intake by drinking water consumption resulted in a dose-dependent increase in 24-hr urinary nitrate excretion and in increased salivary nitrate and nitrite levels. The mean log variant frequency of peripheral lymphocytes was significantly higher in the medium well water exposure group than in the low and medium tap water exposure groups. An **inverse** correlation between peripheral lymphocyte **labeling** index and nitrate concentration of drinking water was observed. Analysis of N-nitrosamine in the urine of 22 subjects by gas chromatography-**mass spectrometry** revealed the presence of N-nitrosopyrolidine in 18 subjects. Analysis of the mutagenicity of well water samples showed that a small number of the well water samples were mutagenic in the Ames Salmonella typhimurium test after concentration over XAD-2 resin. In conclusion, consumption of drinking water, especially well water, with high nitrate levels can imply a genotoxic risk for humans as indicated by increased HPRT variant frequencies and by endogenous formation of carcinogenic N-nitroso compounds from nitrate-derived nitrite.

L24 ANSWER 9 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 96128241 EMBASE
DOCUMENT NUMBER: 1996128241
TITLE: Proteinuria and plasma hexosugars in early-stage glomerulonephritis.
AUTHOR: Pitkanen E.
CORPORATE SOURCE: Department of Clinical Chemistry, University Hospital, Haartmaninkatu 4,FIN-00290 Helsinki, Finland
SOURCE: Clinical Nephrology, (1996) 45/4 (226-229).

ISSN: 0301-0430 CODEN: CLNHBI
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 028 Urology and Nephrology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Marked changes in the plasma concentration of several non-glucose monosaccharides have been detected among patiens with end-stage renal disease. To find changes specific to renal disease and not caused by a failing urinary excretion, we studied the plasma monosaccharide concentration in patients with early-stage glomerulonephritis whose renal function was normal or only mildly compromised. Plasma mannose, fructose and 1,5-anhydroglucitol (1,5-AG) concentrations were measured using gas chromatography/**mass spectrometry** and isotope-**labelled** sugar standard additions. The daily urinary protein excretion was positively correlated with the plasma cholesterol (r = 0.785), mannose (r = 0.550), triglyceride (r = 0.531) and fructose (r = 0.401) concentrations, while the correlation with 1,5-AG (r = -0.581) was **inverse**. The correlations were statistically significant. As previous studies have revealed a close positive correlation between the plasma mannose and glucose concentrations, we calculated the mannose/glucose concentration ratio to find out whether the increase in mannose concentration was or was not explained by ambient glucose. There was a strong correlation between the ratio and the urinary protein excretion (r = 0.704). It is inferred that the metabolic syndrome associated with glomerulonephritis and characterised by hyperlipidemia also involves a derangement in mannose and 1,5-AG metabolism.

L24 ANSWER 10 OF 16 EMBASE
on STN
ACCESSION NUMBER: 94219850 EMBASE
DOCUMENT NUMBER: 1994219850
TITLE: Comparison of stable isotopes and radioisotopes in the measurement of iron absorption in healthy women.
AUTHOR: Barrett J.F.R.; Whittaker P.G.; Fenwick J.D.; Williams J.G.; Lind T.
CORPORATE SOURCE: University Department of Obstetrics, Leazes Wing, Royal Victoria Infirmary,Newcastle-upon-Tyne NEI 4LP, United Kingdom
SOURCE: Clinical Science, (1994) 87/1 (91-95).
ISSN: 0143-5221 CODEN: CSCIAE
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 010 Obstetrics and Gynecology
023 Nuclear Medicine
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
AB 1. Stable isotope methods are being used to investigate the absorption of dietary iron. In order to be certain that this new methodology is accurate, we have compared results obtained using stable isotopes and inductively coupled plasma **mass spectrometry** with those determined using a radioisotope and whole body counting. 2. The stable isotope 54Fe (2.8 mg) was given to 10 healthy non-pregnant women. Six women received the isotope in aqueous form, and four took it with a meat meal. The 54Fe served as a carrier for 10 ng of the radioisotope 59Fe. An ampoule (200 μg) of the isotope 57Fe or 58Fe was then given intravenously, and in serum samples taken over the next 10h the ratios of the stable iron isotopes were measured by inductively coupled plasma **mass spectrometry** and the oral iron absorption was calculated. This was then compared with the results obtained by using a whole body counter to measure (on day 0 and day 14) the γ-activity emitted by the radioisotope. 3. The mean iron absorption measured by both

methods ranged from 8% to 45%. Measurement of the post-absorptive serum enrichment of the stable isotopes provided estimates of absorption from both aqueous and food iron which were similar to that yielded by whole body counting, the mean difference being -1.5% (95% confidence interval -5.2 to 2.1%). Absorption estimated by stable isotopes exhibited the same **inverse** relationship with the serum ferritin level (body iron stores) to that known to exist with whole body counting. Similar estimates of food iron absorption were obtained irrespective of the type of isotope used as an extrinsic **label**, implying that stable isotopes are as valid as radioisotopes in reflecting intrinsic food iron absorption. 4. This study validates the use of stable isotopes and post- absorption curves as a new and accurate technique in the measurement of iron absorption.

L24 ANSWER 11 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 94013908 EMBASE
DOCUMENT NUMBER: 1994013908
TITLE: Structural characterization of gangliosides from resting and endotoxin- stimulated murine B lymphocytes.
AUTHOR: Portner A.; Peter-Katalinic J.; Brade H.; Unland F.; Buntemeyer H.; Muthing J.
CORPORATE SOURCE: Institut fur Zellkulturtechnik, Postfach 10 01 31,33501 Bielefeld, Germany
SOURCE: Biochemistry, (1993) 32/47 (12685-12693). ISSN: 0006-2960 CODEN: BICHAW
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English

AB B lymphocytes from CBA/J mice were stimulated in splenocyte cultures for 72 h with various endotoxins. Bisphosphoryl lipid A from Escherichia coli had the highest stimulatory effect followed by LPS of Citrobacter freundii and Salmonella minnesota as measured by [3H]thymidine uptake. Gangliosides of stimulated B cells (metabolically **labeled** with D-[1-14C]galactose and D- [1-14C]glucosamine) and unlabeled gangliosides from resting B cells (prepared from spleens without stimulus) were analyzed by high-performance TLC, DEAE anion-exchange HPLC, and immunostaining procedures. Contents of ganglioside-derived sialic acids, quantified by HPLC as their fluorescent derivatives, decreased from stimulated to resident B lymphocytes in the following order: LPS S. minnesota > LPS C. freundii > bisphosphoryl lipid A E. coli > resting B cells. Gangliosides of resting B cells contained more N- glycolyl- than N-acetylneuraminic acid, whereas **inverse** ratios were found in activated cells, indicating a shift from N-glycolyl- to N-acetylneuraminic acid due to stimulation. Furthermore, a higher disialoganglioside content was characteristic for activated B cells. Fast atom bombardment **mass spectrometry** was performed with permethylated mono- and disialoganglioside fractions of LPS S. minnesota and LPS C. freundii stimulated B cells. Major gangliosides were G(M1a) and G(D1a) beside minute amounts of G(D1b). The structural heterogeneity in the gangliosides was caused by (a) N-substitution of the sialic acids with either acetyl or glycolyl groups, (b) variation in the long-chain base (sphingosine, sphinganine), and (c) substitution of the ceramide moiety by fatty acids of different chain length and degree of unsaturation (C(16:0), C(24:0,24:1)). In summary, these findings indicate the predominance of the G(M1a) pathway in murine B lymphocytes whereas G(M1b)- type gangliosides are preferentially expressed in T lymphocytes as well as macrophages.

L24 ANSWER 12 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 87072780 EMBASE

DOCUMENT NUMBER: 1987072780
TITLE: Quantitation of serum bile acids by isotope dilution with 13C-labelled homologs.
AUTHOR: Stellaard F.; Paumgartner G.
CORPORATE SOURCE: Department of Medicine II, Klinikum Grosshadern, University of Munich, D-8000 Munich 70, Germany
SOURCE: Clinica Chimica Acta, (1987) 162/1 (45-51).
CODEN: CCATAR
COUNTRY: Netherlands
DOCUMENT TYPE: Journal
FILE SEGMENT: 029 Clinical Biochemistry
023 Nuclear Medicine
LANGUAGE: English

AB Quantitation of individual bile acids in serum can be carried out with radioimmunoassays or with gas chromatography. The most specific measurements are obtained with combined gas chromatography/**mass spectrometry** employing stable isotope **labelled** bile acids as internal standards. So far only the use of deuterated internal standards has been described for this purpose. 24-13C-**labelled** bile acids have not been used since correction for the natural abundance of the 13C contribution has to be made. Furthermore, the maximal degree of **labelling** of 13C-**labelled** bile acids is about 90%. This requires additional correction for the percentage of unlabelled molecules. Using 13C-**labelled** bile acids as internal standards and adequate corrections for isotope interference we have measured individual serum bile acids in healthy volunteers by **inverse** isotope dilution with coefficient of variation (CV) values of 5.4-6.2% determined for the total procedure of sample preparation and analytical technique. In fasting serum of 15 healthy volunteers chenodeoxycholic acid averaged 0.98 ± SD 0.77 μmol/l, cholic acid 0.49 ± 0.39 μmol/l and deoxycholic acid 1.07 ± 0.68 μmol/l. Two hours postprandially these values increased to 2.42 ± 1.46 μmol/l for chenodeoxycholic acid, 0.81 ± 0.45 μmol/l for cholic acid and 1.66 ± 1.02 μmol/l for deoxycholic acid. These data agree well with those described in the literature obtained with deuterated internal standards. It may be concluded that 24-13C-**labelled** bile acids are suitable as internal standards for quantitation of serum bile acids, if corrections for isotope interferences are made.

L24 ANSWER 13 OF 16 EMBASE
on STN
ACCESSION NUMBER: 86071833 EMBASE
DOCUMENT NUMBER: 1986071833
TITLE: Determination of chlorpromazine and its major metabolites by gas chromatography/mass spectrometry: Application to biological fluids.
AUTHOR: Gruenke L.D.; Craig J.C.; Klein F.D.; et al.
CORPORATE SOURCE: Department of Pharmaceutical Chemistry, School of Pharmacy, University of California, San Francisco, CA 94143, United States
SOURCE: Biomedical Mass Spectrometry, (1985) 12/12 (707-713).
CODEN: BMSYAL
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
029 Clinical Biochemistry
LANGUAGE: English

AB A method for the quantitative determination of chlorpromazine and five of its major metabolites in a single sample of biological fluid in the ng/ml range has been developed utilizing gas chromatography/**mass spectrometry** with selected ion recording. The assay is highly specific and quantification is accomplished by an **inverse** stable isotope dilution technique, using deuterium-**labeled** variants of the compounds as internal standards. In this way the concentrations of

chlorpromazine and five of its major metabolites (the sulfoxide, the N-oxide, the monodemethylated, the didemethylated, and the 7-hydroxylated compounds) can be determined in biological fluids. Levels in humans have been measured both in plasma and in red blood cells and are compared to those found in related in vitro studies.

L24 ANSWER 14 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 81030656 EMBASE
DOCUMENT NUMBER: 1981030656
TITLE: Study of theophylline metabolism in premature human newborns using stable isotope labelling.
AUTHOR: Brazier J.L.; Ribon B.; Desage M.; Salle B.
CORPORATE SOURCE: Dept. Chim. Anal. Pharmaceut., Fac. Pharm., 69373 Lyon Cedex 2, France
SOURCE: Biomedical Mass Spectrometry, (1980) 7/5 (189-192). CODEN: BMSYAL
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal
FILE SEGMENT: 029 Clinical Biochemistry
023 Nuclear Medicine
007 Pediatrics and Pediatric Surgery
037 Drug Literature Index
015 Chest Diseases, Thoracic Surgery and Tuberculosis
LANGUAGE: English

AB A new metabolic pathway of theophylline has been investigated in premature human newborns using the ion cluster technique of stable isotope **labelling** combined with gas chromatography **mass spectrometry**. **Labelled** caffeine, paraxanthine and theobromine have been found in plasma and urine of two pretern newborns receiving [1,3-15N],]12-13C]theophylline for the treatment of primitive apneas. Theophylline is converted to caffeine by N-7 methylation. In adults, the **inverse** process exists wherein caffeine is demethylated to give theophylline.

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ACCESSION NUMBER: 79221313 EMBASE
DOCUMENT NUMBER: 1979221313
TITLE: Biotransformation of mazindol. III. Comparison of metabolism in rat, dog, and man.
AUTHOR: Dugger H.A.; Madrid V.O.; Talbot K.C.; et al.
CORPORATE SOURCE: Drug Metab. Sect., Sandoz Pharmaceut., East Hanover, N.J. 07936, United States
SOURCE: Drug Metabolism and Disposition, (1979) 7/3 (132-137). CODEN: DMDSAI
COUNTRY: United States
DOCUMENT TYPE: Journal
FILE SEGMENT: 030 Pharmacology
037 Drug Literature Index
LANGUAGE: English

AB After administration of tritium-**labeled** mazindol (I) six to seven metabolites from rat, dog, and human urine were isolated by Amberlite XAD-2 extraction, DEAE-Sephadex chromatography, and preparative thin-layer chromatography and characterized by **mass spectrometry**. In addition, six mazindol-related substances present in trace quantities were also characterized by **mass spectrometry**. The major metabolite in all three species was 5-(p-chlorophenyl)-2,5-dihydro-5-hydroxy-3H-imidazo[2,1-a]isoindol-3-one (II). Also present, but in lesser amounts, in all three species were 5-(p-chlorophenyl)-2,5-dihydro-2,5-dihydroxy-3 H-imidazo[2,1-a]isoindol-3-one (III), what is probably 3-(p-chlorophenyl)-2-glycyl-3-hydroxy-1-isoindolinone (IV), and a fourth metabolite of unknown structure (VII). 2-(p-Chlorobenzoyl)-N-2-(aminoethyl)benzamide (VI), a major urinary

metabolite in man, was characterized by **mass spectrometry**, synthesized, and quantitated by **inverse** isotope dilution in human urine (12.0% of the dose) and in dog (7.3% of the dose) and rat (0.64% of the dose) urine and feces. VI, as a conjugate, was also shown to be the most slowly excreted of the human metabolites with a half-live of ca. 5.25 days. The dog was the only one of the three species studied to excrete 3-(p-chlorophenyl)-3-hydroxy-1-oxoisoindoline-2-acetic acid (IX). Rat urine contained no conjugated metabolites; II and VI were found as conjugates in human urine; only IV was found in the conjugate fraction from dog urine. The latter may have arisen by hydrolysis of II during workup.

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ACCESSION NUMBER: 77099374 EMBASE
DOCUMENT NUMBER: 1977099374
TITLE: Biotransformation of mazindol. I. Isolation and identification of some metabolites from rat urine.
AUTHOR: Dugger H.A.; Coombs R.A.; Schwartz H.J.; et al.
CORPORATE SOURCE: Drug Metab. Sect., Sandoz Pharmaceut., East Hanover, N.J. 07936, United States
SOURCE: Drug Metabolism and Disposition, (1976) 4/3 (262-268). CODEN: DMDSAI
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
030 Pharmacology
LANGUAGE: English

AB Three metabolites of tritium **labeled** mazindol were isolated from rat urine by the **inverse** isotope dilution technique in which the **labeled** metabolites were synthesized by a second, smaller group of rats. These metabolites were isolated by Amberlite XAD 2 chromatography and silica gel column and preparative thin layer chromatography. The major metabolite (II) was shown by **mass spectrometry** of its trimethylsilyl derivative, NMR **spectroscopy**, and degradation studies to be 5 (p chlorophenyl) 2,5 dihydro 5 hydroxy 3H imidazol [2,1 a] isoindol 3 one. A comparison of its **mass** spectrum with that of an authentic sample prepared from 1 (p chlorophenyl) 3 ethoxy 1 methoxy 1H isoindole and glycine ethyl ester confirmed the assignment. Metabolite III was shown by its **mass** spectrum, NMR spectrum, degradation, and analogy with metabolite II to be 5 (p chlorophenyl) 2,5 dihydro 2,5 dihydroxy 3H imidazo [2,1 a] isoindol 3 one. Only a small amount of metabolite IV was isolated as an artifact, 3 (p chlorophenyl) 2 glycyl 3 methoxy 1 isoindolinone, as shown by its **mass** spectrum and degradation to 2 (p chlorobenzoyl) benzoic acid. The metabolite IV is believed to be the corresponding 3 hydroxy compound. Synthesis of IV by base catalyzed hydrolysis of metabolite II supports the structural assignment. In addition, the facile conversion of synthetic IV into the corresponding 3 methoxy derivative by acidic methanol was also observed.